

Datasheet for #sbcw7646 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

WARNING: Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

WARNING: Beware of the polarity of the laser. This laser has to be powered with negative current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). To use with a power-supply ILX Lightwave LDX-3232 or equivalent.

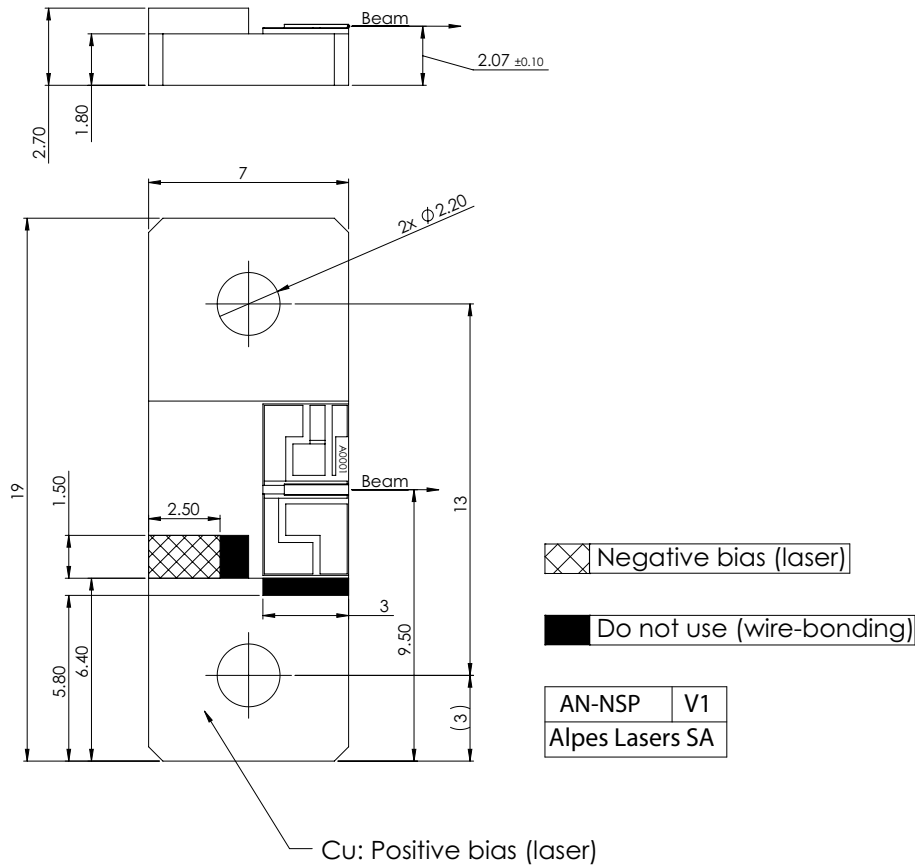


Figure 1: Support mounting for #sbcw7646 DN

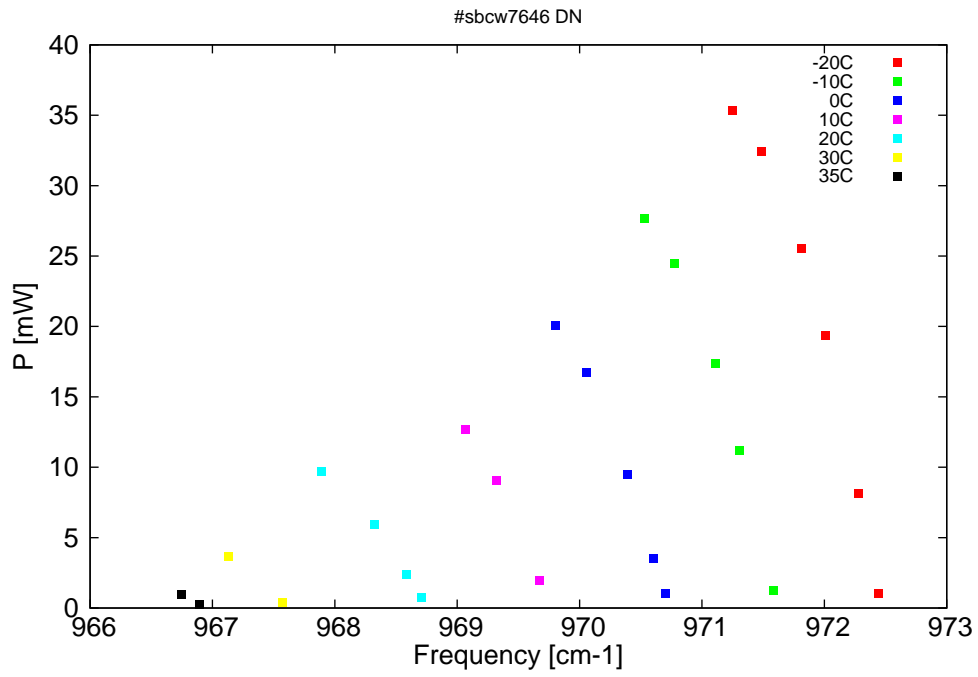


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

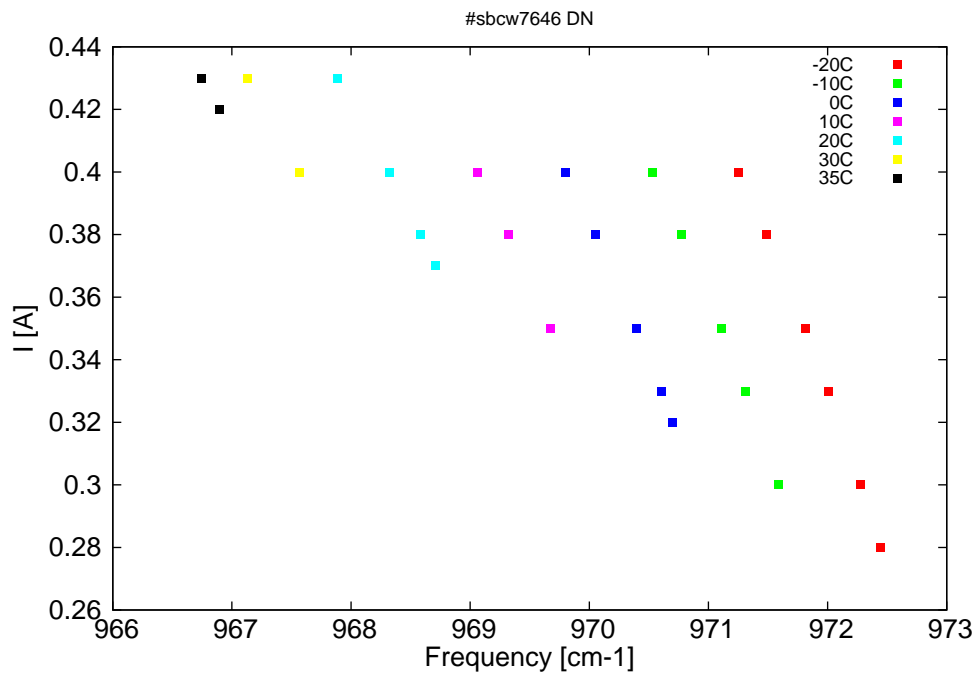


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10283.4	972.4	1	-20	8.9	0.28
10285.1	972.3	8.1	-20	9	0.3
10288	972	19.3	-20	9.3	0.33
10290	971.8	25.5	-20	9.5	0.35
10293.5	971.5	32.4	-20	9.8	0.38
10296	971.3	35.3	-20	10.1	0.4
10292.4	971.6	1.3	-10	9	0.3
10295.4	971.3	11.2	-10	9.3	0.33
10297.5	971.1	17.4	-10	9.5	0.35
10301	970.8	24.5	-10	9.8	0.38
10303.6	970.5	27.6	-10	10	0.4
10301.8	970.7	1	0	9.2	0.32
10302.8	970.6	3.5	0	9.3	0.33
10305.1	970.4	9.5	0	9.5	0.35
10308.7	970.1	16.7	0	9.8	0.38
10311.4	969.8	20	0	10	0.4
10312.8	969.7	2	10	9.4	0.35
10316.5	969.3	9	10	9.8	0.38
10319.2	969.1	12.7	10	10	0.4
10323	968.7	0.8	20	9.6	0.37
10324.4	968.6	2.4	20	9.7	0.38
10327.1	968.3	6	20	10	0.4
10331.8	967.9	9.7	20	10.3	0.43
10335.2	967.6	0.4	30	9.9	0.4
10339.9	967.1	3.7	30	10.3	0.43
10342.4	966.9	0.3	35	10.1	0.42
10344	966.7	1	35	10.3	0.43

Table 1 : singlemode optical output power as function of operating parameters

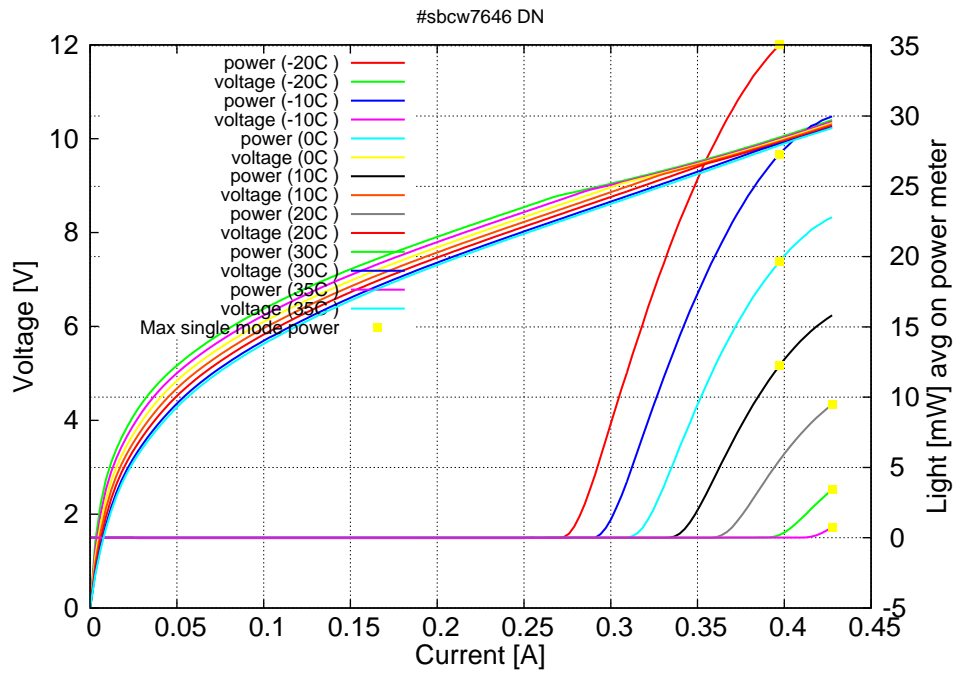


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.27A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.4A between -20C and 10C, 0.43A between 20C and 35C.

Figure 3: spectra at different temperatures for various DC currents

